2:Newcomb E-4, 5 (1951-1952) 1956
NM7 Delaware NM7

Delaware Technology

Subsistence

At the beginning of historic times all of the Middle Atlantic Slope cultures subsisted by means of hoe-gardening, fishing, and hunting. The relative importance of each of these subsistence methods has long been disputed for the area as a whole. Kroeber has maintained that agriculture was not basic to life in the Eastern Area, that "there is little to argue that the culture was leaning very fundamentally on agriculture."[6] He is almost certainly in error in minimizing agriculture and in the reasons he gives for its unimportance, at least so far as the Delawares were concerned. Among the more inland groups agriculture definitely was of paramount importance. In 1654 Lindestrom described a group on the Schuylkill who had "... . their dwellings side by side one another, wherefore this land is thereby being cleared and cultivated with great power."[7] Just before 1610 described a group in the neighborhood of Sandy Hook as having a "great store of Maiz,"[8] and De Vries, De Laet, and William Penn all said that the principal food was maize.[9] Krieger in 1663, in an expedition against some New Jersey Delawares, cut down two hundred and fifteen acres of maize and burned over one hundred pits of corn and beans.[10] Wallace recently contended that agriculture was basic in the economy and added that the high status of women was a function of their basically important agricultural activities.[11] Hunting, gathering, and fishing were also important activities, and seasonally they may well have rivaled agricultural activity.

Gardening.—The principal crop plant was corn or maize (*Zea mays*), raised by the women.[12] They had several varieties "... . .white, red, blue, flesh-colored, brown, yellow and spotted ears."[13] Holm in the early decades of the seventeenth century said the Delawares grew "... black maize of the colour of tar. . ."[14] Harrington in his field work among the Oklahoma Delawares noted six varieties that had been handed down from the early days and were still grown. There were "three soft and three hard" varieties.[15] The Delawares today remember or possess a white-flour corn used principally in bread;[16] red corn, a flint variety; Osage corn, a soft variety; blue corn; and Deer corn, a striped variety (J.T.). There is no assurance that these varieties have not been borrowed by the Delawares in recent times. The cultivated fields seem to have been rather small in extent. Kalm stated that an Indian's garden took up no more ground "than a farmer in our country takes to plant cabbage for his family. At least, a farmer's cabbage and turnip ground,

[6]Kroeber, 1947, p. 148.
[7]Lindestrom, 1925, p. 170.
[8]Just, 1909, p. 18.
[9]De Vries, 1909, p. 218; De Laet, 1909, p. 57; Penn, 1912, p. 232.
[10]O'Callaghan, 1851, IV: 39.
[11]Wallace, 1947, pp. 9-10.
[12]De Laet, 1909, p. 49; Denton, 1845, p. 6; Van der Donck, 1909, p. 302; Thomas, 1912, p. 341; Penn, 1912, p. 232.
[13]Lindestrom, 1925, p. 179; see also De Rasieres, 1909, p. 107; Kalm, 1937, I: 74.
[14]Holm, 1834, p. 49.
[15]Harrington, 1913, p. 231.
[16]Lindestrom, 1925, p. 180, said bread was baked from white and yellow corn.

2:Newcomb E-4, 5 (1951-1952) 1956
NM7 Delaware NM7

taken together, is always as extensive, if not more so, than all the corn fields and kitchen gardens of an Indian family."[17] Luckenbach, a Moravian missionary of the early nineteenth century, said that the fields were "limited to two or three acres of corn for each family."[18] The Delawares today term the gardens "squaw patches" and claim that they never exceeded five acres in size (M.B., O.A.).

Most Delaware archaeological sites are in creek or valley bottoms;[19] in the eighteenth century such bottom land was chosen for gardens, since it was easily worked and was generally fertile.[20] Zeisberger, in the eighteenth century, took pains to point out that land away from rivers, although suitable for tillage by Europeans, was not utilized at all for this purpose by Indians.[21] Garden plots were cleared by bruising or removing the bark of the trees, then burning the trees after they were dry.[22] The seventeenth-century Swedish writers stated that garden plots were moved after the soil was exhausted.[23] Van der Donck in the middle of the century and Loskiel in the next century denied the use of fertilizer.[24] New England Indians, however, fertilized the land with fish, and Wallace has suggested that this trait may have been present among the Delawares.[25]

Corn was planted in ". . . square hills (so far apart) that one can conveniently walk between the hills. . . . And in each hill 6 or 7 grains are set."[26] According to De Rasieres:

> They make heaps like molehills, each about two and a half feet from the others, which they sow or plant in April with maize, in each heap five or six grains; in the middle of May, when the maize is the height of a finger or more, they plant in each heap three or four Turkish beans . . . . R [corn] is a grain to which much labor must be given, with weeding and earthing-up, or it does not thrive; and to this the women must attend very closely.[27]

Squash, pumpkins, several varieties of beans, and tobacco were also grown.[28] According to M.B. tobacco was grown only by women past the menopause. The Delawares blended their tobacco with sumac, one third sumac to two thirds tobacco.[29]

Hunting.—Hunting was important to the Delaware economy, not only because it provided food, but also because pelts and hides provided most of the material for clothing. The main objects of the hunt were deer and bear, but virtually all of the other mammals of their habitat were hunted and utilized for clothing or for food. This list included fox, raccoon, skunk, porcupine, opossum, and squirrel.[30] The Delawares

[17] Kalm, 1937, I: 307.
[18] Luckenbach, 1938, pp. 598-99.
[19] Personal communication from John Witthoft.
[20] Zeisberger, 1910, p. 44.
[21] *Ibid.*, p. 36.
[22] Johnson, 1917, p. 279; Kalm, 1937, I: 230; Harrington, 1913, p. 221.
[23] Johnson, 1917, p. 279.
[24] Loskiel, 1794, p. 66.
[25] Flannery, 1939, p. 10; Wallace, 1947, p. 18.
[26] Lindestrom, 1925, p. 179.
[27] De Rasieres, 1909, p. 107; Johnson, 1917, p. 279; and Harrington, 1913, p. 221, contain similar accounts of their horticulture.
[28] Just, 1909, p. 21; Johnson, 1917, p. 279; Kalm, 1937, I: 74; Lindestrom, 1925, pp. 180-81; Holm, 1834, p. 122.
[29] Speck, 1943, p. 324.
[30] Denton, 1845, p. 7; Van der Donck, 1909, p. 303; Zeisberger, 1910, pp. 37, 62-63.

9: Kinietz E-4, 5 (1938) 1946
NM7 Delaware NM7

next period, however, Johnston and Chipps said that the men and women shared the labor of moving and pitching camp. In the fourth period W. L. was again the only one to place the responsibility on the women.

The husband did not strike his wife frequently, if at all, according to all the information gathered (283). Johnston and Chipps said that he might do so if she were ill-tempered or refractory (284). The modern informants denied this as a just cause, although E. R. said that it was up to the husband to punish his wife if she broke a rule.

Food, Mode of Living, etc.

Heckewelder said that the Delaware, Mahicans, and Shawnee were all very particular in their choice of meats and that nothing short of the most pressing hunger could induce them to eat of certain animals, such as the horse, dog, wildcat, panther, fox, muskrat, or wolf, all of which he had several times seen the Chippewa eat with a good appetite (288-91)." J. W. said that opossum, wolf, dog, woodchuck, snake, crow, hawk, owl, eagle, and, in fact, most fowls were not eaten. W. L. also said that opossum, muskrat, and several kinds of birds were not eaten. Apparently the symbols of the three tribal divisions, turtle, turkey and wolf, were not taboo for that reason, for only the last one was included on any list. The totems of the extinct subdivisions may have been taboo. This is true of the opossum which was most frequently mentioned as not being eaten and it was the name of one of the subdivisions. However, the Delaware regard the opossum as endowed with supernatural powers and in the nature of a trickster and have many stories that evince this attitude.

There seems to have been no taboos on vegetables eaten (292-98). Corn was the principal item cultivated. It was supplemented by the usual beans and squashes, and later vegetables introduced by the whites were also cultivated. Wild or ground potatoes and other less important wild products were gathered. The

"Heckewelder, *History, Manners, and Customs of the Indian Nations*, p. 196.

9: Kinietz E-4, 5 (1938) 1946
NM7 Delaware NM7

J. W.	*Kĭčinipen*—Summer	805
W. L.	*Kĭčinipen*—Starting summer	821

July

Zeisberger	*Yugatamoewi gischuch*—The time of raising the earth about the corn	
Heckewelder	—The summer month	
Johnston	*Gock, kau, tau, ma, ekeshoe*—The moon when vegetation is blossoming	[824]
Pipe	*Yaukāütamwaa kēēshooh*—Moon of sacrifice or prayer. Time of feast of first fruits	[796]
Chipps	*La-kòk-me-aò-e-kà-so*	
J. W.	*Dainipen*—Middle summer	
W. L.	*Lainipen kĭŏo*—Middle of summer	
W. T.	*Kĭčinĭpen*—Middle of summer	

August

Zeisberger	*Sakauweuhewi gischuch*—Deer month	
Zeisberger	*Winu gischuch*—The time when the corn is in the milk and ready to eat and roast	[824 243]
Heckewelder	—The month of roasting ears	
Johnston	*Sok, ho, a, ha, ie, kie, shough, i, e,*—The moon when the deer begin to turn gray	[825]
Pipe	*Saukiioshāā kēēshooh*—Moon in which deer get blue hair	
Chipps	*Wà-no-e-kà-so*	
J. W.	—Dry, hot, refreshing	
W. L.	*Kĭčitakŏk kĭŏo*—Beginning fall month	
W. T.	*Socowigiŏo*—Deer change color, Fall side of summer	[825]

September

Zeisberger	*Kitschitachquoak*—Autumn month	
Heckewelder	—The autumnal month	